

Seams Workshop Notes – June 20 - 21, 2000
Flip Chart Notes

DAY 1 – JUNE 20 – WMIC PORTION (BREAKOUT SESSION FLIP CHART NOTES)

Session 1 - Price Reciprocity

- Eliminate Pancaking
- Lee expensive to get across the system
- Eliminate Cost Shifting

How do we get reciprocity with 2 more RTOs?

Pay in 1 RTO – get free ride on others based on reciprocity agreements

- Annual True-up
- Or track variations
- Capital transfer

Larry's equations for calculating net revenue exchanges

Session 1 - Operation and Scheduling

- Standard Deadline for scheduling
- Flexible
- Coordinated

- Solutions
 - CAISO
 - RTO West
 - WSCC Develop Standard

- 7 day scheduling/5 day scheduling
 - CAISO
 - PNW
 - APS/AZ
 - New Mexico

- Next Day
- Next Hour
- 10 Minute

- Nested Control Areas in RTOs
 - Different models based on company needs

- Continuous Process – Hourly Basis around the clock
 - Issue – tagging

How do E-Tags fit into the market that we are in the process of creating

Loop Flow – Unscheduled Flow Mitigation Plan – How do you monetize this?

Congestion Management

- Loop Flow

- Standard

- Parallel flow on parallel lines

Line Loading Relief in 10 minutes

- Coordination problem between the two sides of the problem – Need on procedure!

- Northern tie has such a procedure and it works

- One entity sets the level based on input from both entities

RTOs to design for present control areas or wait to get NERC's proposed Control Area Definition?

Session 1 - Curtailments – Phil Park

What do we do today?

- Emergency period – Curtail schedules for reliability

- One Hour – Allocated pro-rata Cost not an issue!

What would we like to do later?

- Emergency Period – Nature and numbers of problems would be different – still curtail for reliability

- One Hour (or maybe 10 minutes) – A market redispatch would be desirable

- RTO would know the value of generation in the future and would make the right decision!

- Compensation to those who are out most often (share the financial costs)

- Large loads could bid in to drop their load (standing offers)

- Also includes generators that will bid to start up at a fixed price in emergencies

- 10 minute market for emergencies

Put more tools in the kit of the dispatchers!!

Economic opportunities

Emergency Curtailment Cost uplift charge

How do you deal with simultaneous needs for a generator or dropped load to meet emergencies?

Reserves from outside a Control Area.

- Require reserves in the local area

Session 1 - Planned Outage Coordination

Planned outages on both sides of a “seam” need to be coordinated
Presently 72 hours notice is required – this is not enough for the competitive market
45 day
not now a common practice
6 months would be a desirable time frame to accommodate delays/changes in
scheduled outages
Coordination of outages in monthly blocks
Question of delta costs from one RTO to another – needs to be a market solution
Need \$ incentives to get maintenance done timely (buy outage slots)
Buy the market price for the maintenance, could then sell the slot if beneficial
Some maintenance is restricted by outside issues

Session 2 – Price Reciprocity

Eliminate pancaking across RTOs
No price shifting in RTOs
Eliminate pancaking within RTOs
Export rates were considered for energy transmitted off the RTO system by IndeGO
One option is to make agreements with neighboring RTOs, However, the net of
differences between some RTOs make this impractical.

Larry’s equation:

$$V1 = R1 + W1(NW) + W1(CA) + W1(DS) - WR1(NW) - WR1(CA) - WR1(DS)$$
$$V2 = R2 + W2(NW) +$$

$$\frac{\text{Sum } W_i(CA) + \text{Sum } W_i(DS)}{\text{Sum } W_i(CA) - \text{Sum } W_i(CA)} - \text{Sum } WR_i(CA) - \text{Sum } WR_i(DS)$$

Changes over time
Do FTRs go with the reciprocal payments?
Set up now?
Alternatives in case no agreement
Transition away over time?

Session 2 – Operations and Scheduling

No overall standard deadline for schedules
Flexible/coordinated

Schedule 10 minute vs. hourly

Line loading relief in real time
Markets
List Cut

Flow Gates, one schedule to be managed

Review tagging with 3 to 5 RTOs

Unscheduled flow mitigation plan, including coordinated phase shifter operation

Lack Market

Mk/dec. redispatch as an RTO uplift

RTO settlement/audit in advance

Losses

Calculation methodology

Who has responsibility

Who pays/methodology

Session 2 – Curtailments

Emergency period

Market period according to rights

RTO should set up bid prices for curtailment – prior to curtailments

Curtailing T. Org – redispatch for counter schedules

Market based solution

Maintain security

Non-firm – takes curtailment, risk – firm otherwise

DAY 2 – JUNE 21 - RTO WEST WORKSHOP

Price Reciprocity

Are all pancakes to be eliminated?
Recovery of costs not recovered through exit fees
Consider cost of incremental investments different than sunk costs
Consider Gen. Interconnect – Policy & Not
California is considered load – apply 12 CP
NW is California load – Apply 12 CP
Pancaking of losses
Pancake elimination – Apply only to RTO Members
What does it mean to join RTO?
IndeGO – Export but no import fee
Export only – discriminatory, both or none
Non-contiguous RTO Members – Competing RTOs
Island Service
Islands – Big vs. Small
Incentives for joining RTOs
RTO Choice
Price recovery – an issue with D Star and Rocky Mtn.
Keep option open for Calif. Muni's and WAPA to join RTO West
Eff of ops of RTO, vs market

Congestion Management at seams

Single management of seams congestion?
How will congestion revenue be shared?
Physical rights manages congestion
Nomogram constraint management
Physical vs. Financial at the seams
Contract rights – Conversion/capture/translation
Seams issue
FTR allocation around the loop – The issue
Physical requires electronic systems
Mid C Hub rights needed?
Existing rights/benefits – related to generator status
TP WG?, CM WG?
Depth of TX Exchange?
Rights, Counterflow
Ancillary Services – handled by Financial?
Counter flows at the Seams?
WIO vs. RTO Role
Product Definition – Ancillary Services, Energy
Nomograms
FDF's, TTC
WICF Discussions
WIO vs. RTO – roles and responsibilities

Curtailment Practices

Emergency vs. Post Emergency – Congestion Management

Market based solutions

Different than Cong. Mgmt.

Value based vs. priority cuts

Emergency – End of next full hour

Who determines value?

Curtailments on bid basis

Load/generation

Don't diminish operator's ability to resolve emergency

New procedures required

Need curtailment practices

At seams

Coord across RTOs

Value based

Commercial Practices

Setting the bar hi?

More coordination

End state – RTO – Operations

WIO – Commercial T & C

WIO Standards are best on rebuttal presumption basis

High level of collaboration on westwide basis – RTOs, WIO

WIO – facilitation vs. directive

WIO facilitation plus SNR Execs a solution

WIO

Transmission built for native load

Collaborative process

Market part + Transmission Provider reach appropriate level of

Sys/Inf, and standardization level of products, procedures, tools

May be highest priority RTO issue

Make sure new CM etc. doesn't set back commercial practice

Standard – no worse than today

Day 1 at least as efficient as today.

Design transition, define steps

Concern Day 1 becomes Day N

Schedule vs. Ability to deliver on schedule

Tagging an example of time required. Don't forget time to implement

What incentives are there to support vibrant market? There needs to be some.

Prioritize based upon reliability

Turn over to Paul

Reliability is constraint

Wrap-up discussion notes

WMIC facilitate near term actions?

Flow gate / Ancillary Services impact on implementation WG.

Performance based incentives as means to find tools

WMIC current problems?

WMIC, RTAs

Characteristics of Coordinating Body

Pre- Post Problem – Def / Resolution